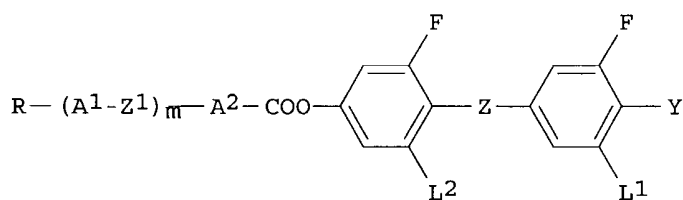


AN 2001:284054 CAPLUS
 DN 134:318777
 ED Entered STN: 20 Apr 2001
 TI Ester compounds and their use in liquid crystalline media
 IN Bremer, Matthias; Heckmeier, Michael; Krause, Joachim; Pauluth, Detlef;
 Goetz, Achim; Schuler, Brigitte
 PA Merck Patent G.m.b.H., Germany
 SO PCT Int. Appl., 158 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C09K019-30
 ICS C09K019-42; C09K019-46
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001027221	A1	20010419	WO 2000-EP9287	20000922
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 19949333	A1	20010419	DE 1999-19949333	19991013
	EP 1228163	A1	20020807	EP 2000-967750	20000922
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003511544	T2	20030325	JP 2001-530427	20000922
PRAI	DE 1999-19949333	A	19991013		
	WO 2000-EP9287	W	20000922		
OS	MARPAT 134:318777				
GI					



I

AB The invention relates to compds. of formula I [R = H, C1-15-alkyl; A1, A2 = trans-1,4-cyclohexylene, 1,4-phenylene, 1,4-cyclohexylene, 1,4-bicyclo-(2,2,2)-octylene, piperidine-1,4-diyl, naphthalene-2,6-diyl, decahydronaphthalene-2,6-diyl, 1,2,3,4-tetrahydronaphthalene-2,6-diyl; Z, A1 = -CO2-, -OCO-, -CH2O-, -OCH2-, -C2H4-, -CH:CH-, -CF2O-, -OCF2-, -C.tplbond.C-, -(CH2)4-, -CH:CHC2H4-, C2F4, single bond; L1, L2 = H, F; Y = F, Cl, CN, halogenated C1-6-alkyl, alkoxy; m = 0, 1] and to a liquid crystalline medium based on a mixture of polar compds. with pos. dielec. anisotropy. The mixture containing one or more compds. of general formula (I) is characterized and suitable for matrix liquid crystal displays. The mixture shows excellent low temperature behavior and switching time.

ST ester compd synthesis liq crystal mixt liq crystal display

IT Liquid crystals
(nematic; synthesis of ester compds. and their use in liquid crystalline media
suitable for matrix liquid crystal display)

IT Liquid crystal displays
(synthesis of ester compds. and their use in liquid crystalline media
suitable
for matrix liquid crystal display)

IT 76802-59-0 76802-61-4 84540-37-4 84816-56-8 85312-59-0
96624-52-1 102714-93-2 106349-49-9 131819-23-3 132123-39-8
132123-45-6 133937-72-1 134412-18-3 135734-60-0 139215-80-8
163002-74-2 163002-75-3 163035-73-2 173837-35-9 173837-36-0
174805-87-9 175859-25-3 181943-55-5 279246-65-0 **335148-27-1**
RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)

(mixture; synthesis of ester compds. and their use in liquid crystalline media
suitable for matrix liquid crystal display)

IT 109-80-8, 1,3-Propanedithiol 1493-13-6, Trifluoromethanesulfonic acid
2713-33-9, 3,4-Difluorophenol 38289-27-9 38289-29-1 72216-35-4
99627-05-1, 3,4,5-Trifluorophenol 105931-73-5, 1-Bromo-3-fluoro-4-
iodobenzene 143418-49-9, 3,4,5-Trifluorophenylboronic acid 176175-97-6
RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis of ester compds. and their use in liquid crystalline media
suitable
for matrix liquid crystal display)

IT 114045-96-4P 187804-77-9P 335125-98-9P 335132-71-3P 335132-72-4P
335132-73-5P 335140-79-9P 335140-82-4P 335140-84-6P 335140-86-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(synthesis of ester compds. and their use in liquid crystalline media
suitable

for matrix liquid crystal display)

IT 335126-00-6P 335126-02-8P 335126-04-0P 335126-06-2P 335126-08-4P
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335126-30-2P 335126-32-4P 335126-34-6P 335126-36-8P 335126-38-0P
335126-41-5P 335126-43-7P 335126-45-9P 335126-47-1P 335126-49-3P
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335128-73-9P	335128-74-0P	335128-75-1P	335128-76-2P	335128-77-3P
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335129-04-9P	335129-05-0P	335129-06-1P	335129-07-2P	335129-08-3P
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335129-24-3P	335129-25-4P	335129-26-5P	335129-28-7P	335129-30-1P
335129-31-2P	335129-32-3P	335129-33-4P	335129-34-5P	335129-35-6P
335129-36-7P	335129-37-8P	335129-38-9P	335129-39-0P	335129-40-3P
335129-41-4P	335129-42-5P	335129-44-7P	335129-45-8P	335129-46-9P
335129-47-0P	335129-48-1P	335129-49-2P	335129-50-5P	335129-51-6P
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335129-57-2P	335129-58-3P			

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

IT	335129-59-4P	335129-60-7P	335129-61-8P	335129-62-9P	335129-63-0P
	335129-64-1P	335129-65-2P	335129-66-3P	335129-67-4P	335129-68-5P
	335129-69-6P	335129-70-9P	335129-71-0P	335129-72-1P	335129-73-2P
	335129-74-3P	335129-75-4P	335129-76-5P	335129-77-6P	335129-78-7P
	335129-79-8P	335129-80-1P	335129-81-2P	335129-82-3P	335129-83-4P
	335129-84-5P	335129-85-6P	335129-86-7P	335129-87-8P	335129-89-0P
	335129-90-3P	335129-91-4P	335129-92-5P	335129-93-6P	335129-94-7P
	335129-95-8P	335129-96-9P	335129-97-0P	335129-98-1P	335129-99-2P
	335130-00-2P	335130-01-3P	335130-02-4P	335130-03-5P	335130-04-6P
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	335130-11-5P	335130-12-6P	335130-14-8P	335130-15-9P	335130-17-1P
	335130-18-2P	335130-19-3P	335130-20-6P	335130-21-7P	335130-22-8P
	335130-23-9P	335130-24-0P	335130-26-2P	335130-28-4P	335130-29-5P
	335130-31-9P	335130-33-1P	335130-35-3P	335130-37-5P	335130-39-7P
	335130-41-1P	335130-43-3P	335130-45-5P	335130-47-7P	335130-49-9P
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	335130-88-6P	335130-90-0P	335130-92-2P	335130-94-4P	335130-96-6P
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	335131-15-2P	335131-17-4P	335131-18-5P	335131-19-6P	335131-20-9P
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	335131-38-9P	335131-39-0P	335131-40-3P	335131-41-4P	335131-42-5P
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	335131-48-1P	335131-49-2P	335131-50-5P	335131-51-6P	335131-52-7P
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	335131-58-3P	335131-59-4P	335131-60-7P	335131-61-8P	335131-62-9P
	335131-63-0P	335131-64-1P	335131-65-2P	335131-66-3P	335131-67-4P
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	335131-73-2P	335131-74-3P	335131-75-4P	335131-76-5P	335131-77-6P
	335131-78-7P	335131-79-8P	335131-80-1P	335131-81-2P	335131-82-3P
	335131-83-4P	335131-84-5P	335131-85-6P	335131-86-7P	335131-87-8P
	335131-88-9P	335131-89-0P	335131-90-3P	335131-91-4P	335131-92-5P
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	335132-03-1P	335132-04-2P	335132-05-3P	335132-06-4P	335132-07-5P
	335132-08-6P	335132-09-7P	335132-10-0P	335132-11-1P	335132-12-2P
	335132-13-3P	335132-14-4P	335132-15-5P	335132-16-6P	335132-17-7P

335132-18-8P	335132-19-9P	335132-20-2P	335132-21-3P	335132-22-4P
335132-23-5P	335132-24-6P	335132-25-7P	335132-26-8P	335132-27-9P
335132-28-0P	335132-29-1P	335132-30-4P	335132-31-5P	335132-32-6P
335132-33-7P	335132-34-8P	335132-35-9P	335132-36-0P	335132-37-1P
335132-38-2P	335132-39-3P	335132-40-6P	335132-41-7P	335132-42-8P
335132-43-9P	335132-44-0P			

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media

suitable

for matrix liquid crystal display)

IT	335132-45-1P	335132-46-2P	335132-47-3P	335132-48-4P	335132-49-5P
	335132-50-8P	335132-51-9P	335132-52-0P	335132-53-1P	335132-54-2P
	335132-55-3P	335132-56-4P	335132-57-5P	335132-58-6P	335132-59-7P
	335132-60-0P	335132-61-1P	335132-62-2P	335132-63-3P	335132-64-4P
	335132-65-5P	335132-66-6P	335132-67-7P	335132-68-8P	335132-69-9P
	335132-74-6P	335132-75-7P	335132-76-8P		
	335132-77-9P	335132-78-0P	335132-79-1P		
	335132-80-4P	335132-81-5P	335132-82-6P		
	335132-83-7P	335132-84-8P	335132-85-9P		
	335132-86-0P	335132-87-1P	335132-88-2P		
	335132-89-3P	335132-90-6P	335132-91-7P		
	335132-92-8P	335132-93-9P	335132-94-0P		
	335132-95-1P	335132-96-2P	335132-97-3P		
	335132-98-4P	335132-99-5P	335133-00-1P		
	335133-01-2P	335133-02-3P	335133-03-4P		
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	335133-07-8P	335133-09-0P	335133-10-3P		
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	335133-14-7P	335133-15-8P	335133-16-9P		
	335133-17-0P	335133-18-1P	335133-19-2P		
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	335133-23-8P	335133-24-9P	335133-25-0P		
	335133-26-1P	335133-27-2P	335133-28-3P		
	335133-29-4P	335133-30-7P	335133-31-8P		
	335133-32-9P	335133-33-0P	335133-34-1P		
	335133-35-2P	335133-36-3P	335133-37-4P		
	335133-38-5P	335133-39-6P	335133-40-9P		
	335133-41-0P	335133-42-1P	335133-43-2P		
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	335133-62-5P	335133-63-6P	335133-64-7P		
	335133-65-8P	335133-66-9P	335133-67-0P		
	335133-68-1P	335133-69-2P	335133-70-5P		
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	335133-95-4P	335133-96-5P	335133-97-6P		
	335133-98-7P	335133-99-8P	335134-00-4P		
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	335134-16-2P	335134-17-3P	335134-18-4P		

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RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

IT	335134-92-4P	335134-93-5P	335134-94-6P	335134-95-7P	335134-97-9P
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	335135-19-8P	335135-21-2P	335135-23-4P	335135-25-6P	335135-27-8P
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	335136-32-8P	335136-34-0P	335136-36-2P	335136-38-4P	335136-40-8P
	335136-42-0P	335136-44-2P	335136-46-4P	335136-48-6P	335136-50-0P
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RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

IT 335139-78-1P 335139-80-5P 335139-82-7P
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RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

IT 335144-92-8P 335144-94-0P 335144-96-2P
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 335145-36-3P 335145-37-4P 335145-38-5P 335145-39-6P 335145-40-9P
 335145-41-0P 335145-42-1P 335145-43-2P 335145-44-3P 335145-45-4P

335145-46-5P	335145-47-6P	335145-48-7P	335145-49-8P	335145-50-1P
335145-51-2P	335145-52-3P	335145-53-4P	335145-54-5P	335145-55-6P
335145-56-7P	335145-57-8P	335145-58-9P	335145-59-0P	335145-60-3P
335145-61-4P	335145-62-5P	335145-63-6P	335145-64-7P	335145-65-8P
335145-66-9P	335145-67-0P	335145-68-1P	335145-69-2P	335145-70-5P
335145-71-6P	335145-72-7P	335145-73-8P	335145-74-9P	335145-75-0P
335145-76-1P	335145-78-3P	335145-80-7P	335145-83-0P	335145-85-2P
335145-86-3P	335145-87-4P	335145-88-5P	335145-89-6P	335145-90-9P
335145-91-0P	335145-92-1P	335145-93-2P	335145-94-3P	335145-95-4P
335145-96-5P	335145-97-6P	335145-99-8P	335146-00-4P	335146-02-6P
335146-03-7P	335146-04-8P	335146-05-9P	335146-06-0P	335146-07-1P
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RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

IT 335147-53-0P 335147-54-1P 335147-55-2P
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335147-59-6P 335147-60-9P 335147-61-0P
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335148-26-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ester compds. and their use in liquid crystalline media suitable

for matrix liquid crystal display)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
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- (4) Chisso Corp; EP 0844229 A 1998 CAPLUS
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- (6) Chisso Corp; EP 1010687 A 2000 CAPLUS
- (7) Merck Patent GmbH; DE 19859421 A 2000 CAPLUS